

## Berwyn

### Hazard Mitigation Plan Point of Contact

| Primary Point of Contact   | Alternate Point of Contact  |
|--|---|
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### Jurisdiction Profile

The following is a summary of key information about the jurisdiction and its history:

**Date of Incorporation:** 1908

**Current Population:** The 2020 U.S. Census population was 57,234. The 2022 U.S. Census estimate indicated the population was 55,021.

**Population Growth:** The overall population has decreased 1.30 percent between 2016 and 2022.

**Location and Description:** The City of Berwyn is located in Cook County, 10 miles directly east of the City of Chicago. Roosevelt Rd. (12th St. / Rt. 38) is the North Border, Pershing Rd. (39th St.) South, Lombard to the East and Harlem (Rt. 43) to the West. The city has a total area of 3.90 square miles (10.1 square km); all land no lakes or rivers.

**Brief History:** On June 6, 1908, Berwyn became a city, receiving its official charter from the State of Illinois. The 1910 census recorded Berwyn's population as 5,841. The first two decades of the twentieth century saw Berwyn develop in much the same way as other Chicago suburbs. It was a place in which, as "The WPA Guide to Illinois" states, "harried commuters relaxed in the evening, weeded gardens, set hens, and mowed their lawns." In 1921, the central portion of the city began its rapid development. Large numbers of Czechs moved from the Pilsen area on Chicago's near West Side to Berwyn and its neighbor on the east, Cicero. Literally thousands of new homes were built each year. The population growth and the infill of vacant land finally brought the two parts of Berwyn together. Berwyn's construction boom continued into the Roaring Twenties, as farms and fields gave way overnight to new homes. Entire blocks were built at once, with contractors digging all basements simultaneously, then bringing in crews to lay foundations, followed by carpenters, bricklayers and plasterers. Block after block of bungalows rose as Berwyn's population swelled; from 14,150 in 1920 to 47,027 in 1930 - an increase of 222% in just ten years. Today, Berwyn has the most significant collection of Chicago-style bungalows in the nation. Traditionally, Berwyn Bungalows are one-story buildings with basement and attic, two to three bedrooms, and a living and dining room.

**Climate:** Berwyn's climate is typical of suburban Chicago and the Midwest in general. Average rainfall is 32 inches per year and average snowfall is 24 inches. The average year round temperature is 48.2 degrees. In July the average high temperature is 83 degrees and in January the average low temperature is 11 degrees. The average humidity is 72.27%

**Governing Body Format:** Berwyn is a City with a Mayor and a City Manager. This body will assume the responsibility for the adoption and implementation of this plan. The city is divided into 8 wards with the Aldermen from each ward forming the City Council. Berwyn also has a Township Board that is elected separately from the city including a Health Department. Berwyn Township was established by the Illinois Legislature in 1922 as one of the few coterminous townships in the state. The Berwyn Public Health District was established at the same time. Berwyn operates 18 departments including a Building Department, Community Development, Finance Department, Fire Department, Police Department, and Water Department.

**Development Trends:** The city has the Berwyn Development Corporation (BDC), a separate entity of the city that operates in direct conjunction with the city. The BDC develops plans, manages Tax Increment Financing (TIF) districts and develops marketing plans for the City of Berwyn. Berwyn is a city of homes with no industry. There are 3 main commerce corridors in Berwyn, Roosevelt Road that borders Oak Park, Ogden Ave. or Route 66 and Cermak Road or 22nd Street. Many new restaurant and assemblies have been completed or are in the plans. Cermak Rd Gateway project is new construction of redeveloped (demolished) properties. Ogden and Roosevelt Rd. are primarily redeveloped properties, small business (stores), auto dealerships and some restaurants.

**Changes in Community Priorities:** We have directed our focus on flood mitigation and green projects for a more sustainable solution to water dispersal.

## Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in *Administrative and Technical Capability Table* below. Information on the community's National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

| TABLE: LEGAL AND REGULATORY CAPABILITY      |                 |                               |                                |                |   |
|---|-----------------|-------------------------------|--------------------------------|----------------|---|
|   | Local Authority | State or Federal Prohibitions | Other Jurisdictional Authority | State Mandated | Comments                                    |
| <b>Codes, Ordinances &amp; Requirements</b> |                 |                               |                                |                |   |
| Building Code                               | Yes             | No                            | Yes                            | No             | BMC, Part 14, Chapters 1420, 1428<br>1/9/07 |
| Zonings                                     | Yes             | No                            | Yes                            | No             | BMC, Part 12, Title 4,<br>1/12/2010         |
| Subdivisions                                | Yes             | No                            | No                             | No             | 220.01 022010                               |

|   |     |    |     |     |  |
|---|-----|----|-----|-----|--|
| Stormwater Management   | Yes | No | Yes | No  | 104 -1957, MWRD  |
| Post Disaster Recovery  | Yes | No | No  | No  | BMC Title 6, Chapter 240, 9/28/2010                          |
| Real Estate Disclosure  | No  | No | Yes | Yes | (765 ILCS 77/) Residential Real Property Disclosure Act.     |
| Growth Management   | Yes | No | No  | No  | Zoning Board and Berwyn Development Board                    |
| Site Plan Review  | Yes | No | No  | No  | 287.012002   |
| Public Health and Safety  | Yes | No | Yes | Yes | Ord. 98-02, 264.01 passed 1-13 -1998                         |
| Environmental Protection  | No  | No | No  | No  |  |
| <b>Planning Documents</b>   |     |    |     |     |  |
| General or Comprehensive Plan   | Yes | No | No  | No  | Comprehensive Plan adopted August 2012                       |
| <i>Is the plan equipped to provide integration to this mitigation plan?</i> |     |    |     |     | Yes, Plan include land use and natural environment elements. |
| Floodplain or Basin Plan  | No  | No | No  | No  |  |
| Stormwater Plan   | No  | No | No  | No  |  |
| Capital Improvement Plan  | Yes | No | No  | No  | In draft form  |
| <i>What types of capital facilities does the plan address?</i>              |     |    |     |     | Water, Transportation, sewer, Parks and rec                  |
| <i>How often is the plan revised/updated?</i>                               |     |    |     |     | 6-year CIP, reviewed and approved annually                   |
| Habitat Conservation Plan   | No  | No | No  | No  |  |
| Economic Development Plan   | Yes | No | Yes | Yes | 210.09 12, BDC   |

|  |     |    |     |    |                                     |
|--|-----|----|-----|----|-------------------------------------|
| Shoreline Management Plan                            | No  | No | No  | No |                                     |
| <b>Response/Recovery Planning</b>                    |     |    |     |    |                                     |
| Comprehensive Emergency Management Plan              | Yes | No | No  | No | 240.01 2010                         |
| Threat and Hazard Identification and Risk Assessment | No  | No | Yes | No | Cook County EMRS<br>Preparing THIRA |
| Terrorism Plan                                       | Yes | No | Yes | No | Cook County EMRS                    |
| Post-Disaster Recovery Plan                          | No  | No | No  | No |                                     |
| Continuity of Operations Plan                        | Yes | No | Yes | No | Cook County EMRS                    |
| Public Health Plans                                  | No  | No | Yes | No | Cook County DPH                     |

| <b>TABLE: FISCAL CAPABILITY</b>                      |                                       |
|--|---------------------------------------|
| <b>Financial Resources</b>                           | <b>Accessible or Eligible to Use?</b> |
| Community Development Block Grants                   | Yes                                   |
| Capital Improvements Project Funding                 | Yes                                   |
| Authority to Levy Taxes for Specific Purposes        | Yes                                   |
| User Fees for Water, Sewer, Gas or Electric Service  | Yes                                   |
| Incur Debt through General Obligation Bonds          | Yes                                   |
| Incur Debt through Special Tax Bonds                 | Yes                                   |
| Incur Debt through Private Activity Bonds            | No                                    |
| Withhold Public Expenditures in Hazard-Prone Areas   | No                                    |
| State Sponsored Grant Programs                       | Yes                                   |
| Development Impact Fees for Homebuyers or Developers | No                                    |
| Other  |                                       |

| <b>TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY</b>                                   |                   |  |
|---|-------------------|--|
| <b>Staff/Personnel Resources</b>  | <b>Available?</b> | <b>Department/Agency/Position</b>                  |
| Planners or engineers with knowledge of land development and land management practices  | Yes               | Public Works, City Engineer, Novotnev & Associates |
| Engineers or professionals trained in building or infrastructure construction practices | Yes               | City Engineer, Novotnev & Associates               |
| Planners or engineers with an understanding of natural hazards                          | Yes               | City Engineer, Novotnev & Associates               |
| Staff with training in benefit/cost analysis  | Yes               | Finance Director and City Adm.                     |
| Surveyors   | Yes               | Novotnev & Associates                              |

|   |     |   |
|---|-----|---|
| Personnel skilled or trained in GIS applications      | Yes | Cook County GIS Consortium  |
| Scientist familiar with natural hazards in local area | Yes | N/A   |
| Emergency manager                                     | Yes | Tony Laureto, Brian Pabst   |
| Grant writers   | Yes | Nichole Campbell, All Department Heads, Brian Pabst, Evan Summers, BDC, Curtis Posgay |

| <b>TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE</b>   |     |
|---|-----|
| What department is responsible for floodplain management in your jurisdiction?  | N/A |
| Who is your jurisdiction's floodplain administrator? (department/position)  | N/A |
| Are any certified floodplain managers on staff in your jurisdiction?  | N/A |
| What is the date of adoption of your flood damage prevention ordinance?   | N/A |
| When was the most recent Community Assistance Visit or Community Assistance Contact?  | N/A |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.  | N/A |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)   | N/A |
| Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?  | N/A |
| Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? | N/A |
| <b>Note: Berwyn does not currently participate in the NFIP, or have a mapped Special Flood Hazard Area by FEMA - Berwyn is A Non-Special Flood Hazard Area (NSFHA).</b>   |     |

### **NFIP Participation Activities**

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called "pre-FIRM" structures, and structures built afterwards are called "post-FIRM." The insurance rate is different for the two types of structures. The effective date for the current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in **Table: NFIP Participating Communities in Cook County** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in **Table: Cook County Flood Insurance Policies** in **Volume I** of the Cook County MJ-HMP.

- The following are the NFIP-related activities completed by our community:
- My community teaches property owners or other stakeholders about the importance of flood insurance through public outreach events, workshops, and/or seminars.
- Our community enforces local floodplain regulations and monitors compliance.

- Our floodplain development regulations meet or exceed Federal Emergency Management Agency (FEMA) or State minimum requirements.
- Our staff provide the following services: permit reviews, GIS, inspections, engineering capability.
- My community's Floodplain Administrator is a Certified Floodplain Manager (CFM).

### **Substantial Improvement Rule and the Substantial Damage Rule**

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

#### *Existing Municipal Code:*

#### *1042.25 Development in Floodplain Areas*

(B) *Definitions.* Unless specifically defined below, word or phrases used in this section shall be interpreted so as to give them the same meaning as they have in common usage and so as to give this document its most reasonable application.

(7) **SUBSTANTIAL DAMAGE.** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50% of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination.

(8) **SUBSTANTIAL IMPROVEMENT.** Any reconstruction, rehabilitation, addition, or improvement of a structure, the cost of which equals or exceeds 50% of the current market value or assessed value, whichever is less, of the structure before the improvement or repair is started, **SUBSTANTIAL IMPROVEMENT** is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

Their ordinance did not include substantial improvement / substantial damage rule provisions; future updates will consider inclusion of these rules as applicable and as appropriate.

| <b>TABLE: COMMUNITY CLASSIFICATIONS</b>      |                       |                       |                        |
|--|-----------------------|-----------------------|------------------------|
|  | <b>Participating?</b> | <b>Classification</b> | <b>Date Classified</b> |
| Community Rating System                      | No                    | N/A                   | N/A                    |
| Building Code Effectiveness Grading Schedule | Yes                   | Unknown               | Unknown                |
| Public Protection/ISO                        | Yes                   | ISO 2                 | Unknown                |
| StormReady                                   | Yes                   | Gold (Countywide)     | 2014                   |
| Tree City USA                                | Yes                   | Tree City USA         | 1986                   |

### **Opportunities to Expand and Improve Capabilities**

The capability to disperse water during a storm is one of the most important issues facing the City of Berwyn. Several mitigation projects have been dedicated to this effort, but funding is a major issue. Grant writers and improved assessments for mitigations would greatly improve our efforts to reduce flooding for the residents.

### **Plan Integration**

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The goals and actions of the Hazard Mitigation Plan will be considered in the next capital improvement planning process.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the Comprehensive Plan.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction's land use plans, zoning, and subdivision codes.

### **Emergency Plan Integration:**

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

### **Emergency Operations Plan (EOP)**

An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

### **Continuity of Operations Plan (COOP)**

The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

### **Recovery Plan**

The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

## Jurisdiction-Specific Natural Hazard Event History

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 2 (1 Single Family, 1 Other Residential)
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

### Federal Disasters Declared

| Disaster Declaration Number | Date Declared | Event                          |
|-----------------------------|---------------|--------------------------------|
| DR-227                      | 4/25/1967     | Tornado                        |
| DR-351                      | 9/4/1972      | Flood                          |
| DR-373                      | 4/26/1973     | Flood                          |
| DR-509                      | 6/18/1976     | Severe Storm(s)                |
| DR-643                      | 6/30/1981     | Severe Storm(s)                |
| DR-776                      | 10/7/1986     | Flood                          |
| DR-798                      | 8/21/1987     | Flood                          |
| DR-997                      | 7/9/1993      | Flood                          |
| DR-1129                     | 7/25/1996     | Severe Storm(s)                |
| DR-1188                     | 9/17/1997     | Severe Storm(s)                |
| DR-1729                     | 9/25/2007     | Severe Storm(s)                |
| DR-1800                     | 10/3/2008     | Severe Storm(s)                |
| DR-1935                     | 8/19/2010     | Severe Storm(s)                |
| DR-1960                     | 3/17/2011     | Snow                           |
| EM-3068                     | 1/16/1979     | Snow                           |
| EM-3134                     | 1/8/1999      | Snow                           |
| EM-3161                     | 1/17/2001     | Snow                           |
| EM-3230                     | 9/7/2005      | Hurricane – Katrina Evacuation |
| EM-3435                     | 3/13/2020     | Biological                     |
| DR-4116                     | 5/10/2013     | Flood                          |
| DR-4489                     | 3/26/2020     | Biological                     |
| DR-4728                     | 8/15/2023     | Severe Storm(s)                |
| DR-4749                     | 11/20/2023    | Flood                          |

### State Disaster Declarations

| Date Declared          | Event                                      |
|------------------------|--|
| 7/26/2010              | Severe Storms, High Winds, Torrential Rain |
| 1/31/2011              | Winter Weather                             |
| 4/25/2011<br>5/25/2011 | High Wind, Tornadoes, Torrential Rain      |



|   |  |
|---|--|
| 4/18/2013<br>4/20/2013<br>4/21/2013<br>4/25/2013<br>4/30/2013 | Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds |
| 1/6/2014  | Heavy Snowfall, Frigid Temperatures                          |
| 7/12/2017<br>7/14/2017  | Thunderstorms, Heavy Rainfall, Flooding                      |
| 1/29/2019   | Winter Storm   |
| 2/6/2020  | Severe Storms  |
| 3/12/2020 – present (reissued monthly)                        | COVID-19   |
| 2/16/2021   | Winter Storms  |
| 2/1/2022  | Winter Storms  |
| 8/1/2022<br>(reissued monthly through 10/28/2022)             | Monkeypox  |

| TABLE: NATURAL HAZARD EVENTS                    |                                      |            |   |
|---|--------------------------------------|------------|---|
| Type of Event                                   | FEMA Disaster Number (if applicable) | Date       | Preliminary Damage Assessment/ Event Narrative            |
| Tornado   | -                                    | 9/3/2018   | -   |
| Severe Weather                                  | -                                    | 8/1/2017   | -   |
| Severe Winter Weather                           | -                                    | 12/13/2013 | -   |
| Severe Wind Storm                               | -                                    | 10/2013    | Trees, Power lines down, minimal property damage          |
| Severe Winter Weather                           | -                                    | 12/2012    | -   |
| Strong Winds                                    | -                                    | 11/2012    | Trees, Power lines down, minimal property damage          |
| Severe Heat                                     | -                                    | 7/2012     | -   |
| Severe Storms, Straight-Line Winds and Flooding | DR-4116                              | 4/26/2012  | Storm water flooding to residential basements             |
| Severe Winter Storm and Snowstorm               | DR-1960                              | 1/31/2011  | -   |
| Severe Storms and Flooding                      | DR-1935                              | 7/19/2010  | Storm water flooding to streets and residential basements |
| Severe Storms and Flooding                      | DR-1800                              | 9/13/2008  | Storm water flooding to streets and residential basements |
| Severe Wind Storm                               | -                                    | 8/2008     | Trees, Power lines down, minimal property damage          |
| Severe Storms and Flooding                      | DR-1729                              | 8/2007     | Storm water flooding to streets and residential basements |
| Severe Winter Weather                           | -                                    | 12/2007    | -   |

|                            |         |        |   |
|----------------------------|---------|--------|---|
| Severe Wind Storms         | -       | 9/2006 | Trees, Power lines down, minimal property damage          |
| Excessive Heat             | -       | 8/2005 | -   |
| Severe Storms and Flooding | -       | 3/2004 | Storm water flooding to streets and residential basements |
| Severe Storms and Flooding | DR-1188 | 8/1997 | -   |

### **Jurisdiction-Specific Hazards: Vulnerabilities and Impacts**

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

**Earthquake:** The City of Berwyn was largely built in the 1920's, including the 5 story MacNeal hospital and railroad tracks that split the city in half. With the City's aging infrastructure, an earthquake would effect thousands of patients in the hospital, the city's residents, and city services. A severe earthquake may cut the city in half due to impeded transportation.

**Flooding:** In 2000, very heavy rains caused urban flooding throughout the community with all major intersections underwater for nearly four hours. Flooding continues to be a problem, especially as the result of heavy rains. In 2023, the City of Berwyn was part of 2 separate FEMA recognized disaster declarations for flooding. The storm water drainage system is aging and cannot keep up with the increasing demand.

**Severe Weather and Wind:** In 1995, due to a thunderstorm two trees toppled over, one landed on the roof of a house. Another tree branch fell on a house and a van. Wind damage continues to be an issue, especially for above-ground powerlines and trees. Power Outages can occur and are especially a problem for critical facilities. Additionally, there is a population of residents that live at or below the poverty line that struggle to afford and maintain heat/AC in their homes. Extreme temperatures would stress this population along with the 11% of the population that is disabled.

**Severe Winter Weather:** With 60,000 residents and 3 major arteries in and out of the City of Chicago, (Ogden Ave., Cermak Rd., and Roosevelt Rd.) heavy snow or ice can cripple traffic and isolate the entire community.

| Indicator                | Number | Percent |
|--------------------------|--------|---------|
| Families in poverty      | 1,114  | 9%      |
| People with disabilities | 5,127  | 9.4%    |
| People over 65 years     | 6,849  | 12.5%   |
| People under 5 years     | 3,764  | 6.9%    |
| People of color          | 40,484 | 73.8%   |
| Black                    | 4,264  | 7.8%    |
| Native American          | 163    | 0.3%    |
| Hispanic                 | 34,255 | 62.5%   |
| Difficulty with English  | 4,872  | 9.5%    |
| Households with no car   | 1,598  | 8.7%    |
| Mobile homes             | 84     | 0.5%    |

*Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.*

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in

this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

### **Jurisdiction-Specific Climate Change Vulnerability and Impacts**

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

| Hazard  | Vulnerability     |
|---|-------------------|
| <b>Current Vulnerability</b>  |                   |
| Dam and Levee Failure   | Not Applicable    |
| Drought   | Remained the Same |
| Earthquake  | Remained the Same |
| Flood (Riverine, Urban, Shoreline)                                      | Increased         |
| Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)         | Remained the Same |
| Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold) | Remained the Same |
| Tornado   | Remained the Same |
| Wildfire (Wildfire Smoke)   | Not Applicable    |

| Hazard  | Vulnerability            |
|---|--------------------------|
| <b>Future Vulnerability</b>   |                          |
| Dam and Levee Failure   | Not Applicable           |
| Drought   | No Change is Anticipated |
| Earthquake  | No Change is Anticipated |
| Flood (Riverine, Urban, Shoreline)                                      | Increase                 |
| Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)         | Increase                 |
| Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold) | Increase                 |
| Tornado   | No Change is Anticipated |
| Wildfire (Wildfire Smoke)   | Not Applicable           |

### **Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas**

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability/exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

| Hazard                       | Vulnerability |
|------------------------------|---------------|
| <b>Current Vulnerability</b> |               |

|   |                   |
|---|-------------------|
| Dam and Levee Failure   | Not Applicable    |
| Drought   | Remained the Same |
| Earthquake  | Remained the Same |
| Flood (Riverine, Urban, Shoreline)                                      | Remained the Same |
| Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)         | Remained the Same |
| Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold) | Remained the Same |
| Tornado   | Remained the Same |
| Wildfire (Wildfire Smoke)   | Not Applicable    |

| Hazard  | Vulnerability            |
|---|--------------------------|
| <b>Future Vulnerability</b>   |                          |
| Dam and Levee Failure   | Not Applicable           |
| Drought   | No Change is Anticipated |
| Earthquake  | No Change is Anticipated |
| Flood (Riverine, Urban, Shoreline)                                      | No Change is Anticipated |
| Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)         | No Change is Anticipated |
| Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold) | No Change is Anticipated |
| Tornado   | No Change is Anticipated |
| Wildfire (Wildfire Smoke)   | Not Applicable           |

The City of Berwyn is densely populated with approximately 55,000 residents within 3.9 square miles. 61% of the population is Hispanic, with 11% of the population in poverty and another 6.1% disabled. In 2023, 2 separate disaster declarations were made due to flooding. Severe weather such as flooding, high winds, extreme temperatures, and heavy snows stress services and infrastructure due to a population that relies on assistance programs.

## Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

| <b>TABLE: HAZARD RISK RANKING</b> |                       |
|-----------------------------------|-----------------------|
| Rank                              | Hazard Type           |
| 1                                 | Severe Weather        |
| 2                                 | Severe Winter Weather |
| 3                                 | Tornado               |
| 4                                 | Earthquake            |
| 5                                 | Flood                 |
| 6                                 | Drought               |
| 7                                 | Dam Failure           |

## New Mitigation Actions

The following are new mitigation actions created during the 2024 update.

### Action B-4.17

| Mitigation Action #17: Reinstate the Downspout Disconnect Program for Residents  |   |   |   |  |   |
|--|---|---|---|--|---|
| <b>Lead Agency/Department Organization:</b><br>Public Works  | <b>Supporting Agencies/ Organizations:</b><br>Engineering | <b>Estimated Cost:</b><br>\$1 Million   | <b>Potential Funding Source:</b><br>General Fund, HMGP, FMA Program | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline) |
| <b>Year Initiated</b>  |   | 2024  |   |  |   |
| <b>Applicable Jurisdiction</b>   |   | City of Berwyn  |   |  |   |
| <b>Applicable Goal</b>   |   | 1,2,3,4,5,6   |   |  |   |
| <b>Applicable Objective</b>  |   |   |   |  |   |
| <b>Cost Analysis (Low, Medium, High)</b>   |   | High  |   |  |   |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |   | Medium  |   |  |   |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  |   | Medium  |   |  |   |
| <b>Action/Implementation Plan and Project Description:</b>   |   | Flood protection best practice to reduce the discharge of large volumes of water into sewers during heavy rains |   |  |   |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |   |   |  |   |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |   | N   |   |  |   |

## Action B-4.18

| Mitigation Action #18: Provide Public Education for Emergency Preparedness   |  |  |  |  |                                    |
|--|--|--|--|--|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Fire Department   | <b>Supporting Agencies/Organizations:</b><br>Berwyn Township | <b>Estimated Cost:</b><br>Low  | <b>Potential Funding Source:</b><br>General Fund,<br>Township General Fund | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>  |  | 2024   |  |  |                                    |
| <b>Applicable Jurisdiction</b>   |  | City of Berwyn   |  |  |                                    |
| <b>Applicable Goal</b>   |  | 1,2,3,4,5,6  |  |  |                                    |
| <b>Applicable Objective</b>  |  | 1,3,5,6,8,11,12,13   |  |  |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>   |  | Low  |  |  |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |  | High   |  |  |                                    |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>  |  | High   |  |  |                                    |
| <b>Action/Implementation Plan and Project Description:</b>   |  | Provide public education for emergency preparedness in regards to flooding, high winds, extreme temperatures, and winter storms. |  |  |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |  |  |  |                                    |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N  |  |  |                                    |

## Action B-4.19

| Mitigation Action #19: 16th St. Utility and Roadway Improvements   |  |   |  |  |  |
|--|--|---|--|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High,<br>\$8,000,000  | <b>Potential Funding Source:</b><br>Surface Transportation Program<br>State Special Grants | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm) |
| <b>Year Initiated</b>  |  | 2024  |  |  |  |
| <b>Applicable Jurisdiction</b>   |  | City of Berwyn  |  |  |  |
| <b>Applicable Goal</b>   |  | 1,2,3,5   |  |  |  |
| <b>Applicable Objective</b>  |  |   |  |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>   |  | High  |  |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |  | High  |  |  |  |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>  |  | Medium  |  |  |  |
| <b>Action/Implementation Plan and Project Description:</b>   |  | The action plan includes the design and construction of water main repairs, water services, sewer repairs, sewer lining, green infrastructure drainage and landscaping, and sidewalk and streetscape amenities. |  |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |   |  |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |  |  |  |

## Action B-4.20

| Mitigation Action #20: Access to Transit Utility and Roadway Improvements   |  |   |  |  |  |
|---|--|---|--|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works   | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High;<br>13,000,000.00  | <b>Potential Funding Source:</b><br>Surface Transportation Program; Invest in Cook Grant Funds | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm) |
| <b>Year Initiated</b>   |  | 2024  |  |  |  |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn  |  |  |  |
| <b>Applicable Goal</b>  |  | 1,2,3,5   |  |  |  |
| <b>Applicable Objective</b>   |  | 1,3,5,6,8,11,12,13  |  |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High  |  |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High  |  |  |  |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)   |  | Medium  |  |  |  |
| <b>Action/Implementation Plan and Project Description:</b>  |  | The project will improve the safety, operations, and drainage conditions throughout the corridor. It includes roadway reconstruction for new storm sewers to separate runoff from the sanitary flows, green infrastructure, lining, and landscape, and water main repairs and water service line replacement as needed. |  |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |   |  |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |  |  |  |



## Action B-4.21

| Mitigation Action #21: East Ave. Roadway Improvements   |  |   |   |  |  |
|---|--|---|---|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works   | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High;<br>\$16,200,000   | <b>Potential Funding Source:</b><br>STP, IEPA, MWRD | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm) |
| <b>Year Initiated</b>   |  | 2024  |   |  |  |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn  |   |  |  |
| <b>Applicable Goal</b>  |  | 1,2,3,5   |   |  |  |
| <b>Applicable Objective</b>   |  | 1,3,5,6,8,11,12,13  |   |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High  |   |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High  |   |  |  |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>   |  | Medium  |   |  |  |
| <b>Action/Implementation Plan and Project Description:</b>  |  | The project includes replacing undersized water mains and sewer systems. The water mains replacement includes the hydrant system used to protect against fire loss. The sewer aspect includes repairs/replacements, lining, and installation of catch basins. Roadway improvements will include curb and gutter repair for water management and green infrastructure and landscaping. |   |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |   |   |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |   |  |  |

## Action B-4.22

| Mitigation Action #22: 34th St. Utility and Roadway Improvements  |  |   |   |  |  |
|---|--|---|---|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works   | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High;<br>\$6,000,000  | <b>Potential Funding Source:</b><br>STP, IEPA, MWRD | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm)<br>Epidemic or Pandemic |
| <b>Year Initiated</b>   |  | 2024  |   |  |  |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn  |   |  |  |
| <b>Applicable Goal</b>  |  | 1,2,3,5   |   |  |  |
| <b>Applicable Objective</b>   |  | 1,3,5,6,8,11,12,13  |   |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High  |   |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High  |   |  |  |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>   |  | High  |   |  |  |
| <b>Action/Implementation Plan and Project Description:</b>  |  | The action plan includes the design and construction of water main repairs, water services, sewer repairs, sewer lining, green infrastructure drainage and landscaping, and sidewalk and streetscape amenities. Reduce flooding and protect critical infrastructure (hospital, schools) |   |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |   |   |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |   |  |  |

## Action B-4.23

| Mitigation Action #23: Cermak Road Roadway Improvement  |  |   |   |  |  |
|---|--|---|---|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works   | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High;<br>\$20,000,000   | <b>Potential Funding Source:</b><br>ARPA, TIF, IEPA, MWRD, BRIC, HMGP | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm) |
| <b>Year Initiated</b>   |  | 2024  |   |  |  |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn  |   |  |  |
| <b>Applicable Goal</b>  |  | 1,2,3,5   |   |  |  |
| <b>Applicable Objective</b>   |  | 1,3,5,6,8,11,12,13  |   |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High  |   |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High  |   |  |  |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>   |  | High  |   |  |  |
| <b>Action/Implementation Plan and Project Description:</b>  |  | The action plan includes the design and construction of water main repairs, water services, sewer repairs, sewer lining, green infrastructure drainage and landscaping, and sidewalk and streetscape amenities. It will also upgrade, replace, and repair the hydrant system in the City's largest business corridor and main thoroughfare. |   |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |   |   |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |   |  |  |

## Action B-4.24

| Mitigation Action #24: Janura Park Stormwater Detention   |  |   |   |  |  |
|---|--|---|---|--|--|
| <b>Lead Agency/Department Organization:</b><br>Public Works   | <b>Supporting Agencies/ Organizations:</b><br>Berwyn Park District | <b>Estimated Cost:</b><br>High;<br>\$6,000,000  | <b>Potential Funding Source:</b><br>IEPA,<br>MWRD,<br>BRIC,<br>HMGP | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood (Riverine, Urban, Coastal/Shoreline)<br>Severe Winter Weather (Snow, Blizzard, Ice Storm) |
| <b>Year Initiated</b>   |  | 2024  |   |  |  |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn  |   |  |  |
| <b>Applicable Goal</b>  |  | 1,2,3,5   |   |  |  |
| <b>Applicable Objective</b>   |  | 1,3,5,6,8,11,12,13  |   |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High  |   |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | Medium  |   |  |  |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>   |  | Medium  |   |  |  |
| <b>Action/Implementation Plan and Project Description:</b>  |  | The project will directly effect 24 acres of residential neighborhood with flooding and sewer back-up. The area is the location where snow is removed to during large falls, to dissipate into the ground instead of the aging sewer system to reduce flooding. |   |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |   |   |  |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | N   |   |  |  |

## Ongoing Mitigation Actions

During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

### Action B-4.1

| <b>Mitigation Action #B - 4.1: Where appropriate, support retrofitting, purchasing, or relocating structures in hazard-prone areas to prevent future damage. Give priority to properties with exposure to repetitive losses.</b>  |  |  |  |  |                                    |
|---|--|--|--|--|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>High   | <b>Potential Funding Source:</b><br>BRIC, HMGP | <b>Estimated Projected Completion Date:</b><br>Long-term<br>(depending on funding) | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>   |  | 2014   |  |  |                                    |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn   |  |  |                                    |
| <b>Applicable Goal</b>  |  | 2, 3, 5  |  |  |                                    |
| <b>Applicable Objective</b>   |  | 7, 13  |  |  |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | High   |  |  |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | Medium   |  |  |                                    |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>   |  | High   |  |  |                                    |
| <b>Action/Implementation Plan and Project Description:</b>  |  | Berwyn has no structures that are considered hazard-prone or that have had repetitive losses |  |  |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |  |  |  |                                    |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | <b>O</b>   |  |  |                                    |

## Action B-4.2

| Mitigation Action #B - 4.2: Continue to support the countywide actions identified in this plan.   |  |                               |  |   |                                    |
|---|--|-------------------------------|--|---|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Short- and long-term | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>   |  | 2014                          |  |   |                                    |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn                |  |   |                                    |
| <b>Applicable Goal</b>  |  | All                           |  |   |                                    |
| <b>Applicable Objective</b>   |  | All                           |  |   |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | Low                           |  |   |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High                          |  |   |                                    |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)   |  | Medium                        |  |   |                                    |
| <b>Action/Implementation Plan and Project Description:</b>  |  |                               |  |   |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |                               |  |   |                                    |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | O                             |  |   |                                    |

**Action B-4.3**

| <b>Mitigation Action #B - 4.3: Actively participate in the plan maintenance strategy identified in this plan.</b>   |  |                               |  |   |                                    |
|---|--|-------------------------------|--|---|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>EMRS, Berwyn Administration  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Short-term | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>   |  |                               |  |   |                                    |
| <b>Applicable Jurisdiction</b>  |  | City of Berwyn                |  |   |                                    |
| <b>Applicable Goal</b>  |  | 1, 2, 3, 6                    |  |   |                                    |
| <b>Applicable Objective</b>   |  | 3, 4, 6                       |  |   |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>  |  | Low                           |  |   |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>   |  | High                          |  |   |                                    |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)   |  | Medium                        |  |   |                                    |
| <b>Action/Implementation Plan and Project Description:</b>  |  |                               |  |   |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>   |  |                               |  |   |                                    |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | O                             |  |   |                                    |

**Action B-4.4**

| <b>Mitigation Action #B- 4.4: Participation in incentive-based programs such as Tree City and StormReady.</b> |  |                               |                                  |                            |                                    |
|---|--|-------------------------------|----------------------------------|----------------------------|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b> | <b>Estimated Projected</b> | <b>Hazard(s) Mitigated:</b><br>All |

|  |                              |  |              |                                      |  |
|--|------------------------------|--|--------------|--------------------------------------|--|
|  |                              |  | General Fund | <b>Completion Date:</b><br>Long-term |  |
| <b>Year Initiated</b>  | 2014                         |  |              |                                      |  |
| <b>Applicable Jurisdiction</b>   | City of Berwyn               |  |              |                                      |  |
| <b>Applicable Goal</b>   | 1, 2, 3, 6                   |  |              |                                      |  |
| <b>Applicable Objective</b>  | 3, 4, 5, 6, 7, 9, 10, 11, 13 |  |              |                                      |  |
| <b>Cost Analysis (Low, Medium, High)</b>   | Low                          |  |              |                                      |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | Medium                       |  |              |                                      |  |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Medium                       |  |              |                                      |  |
| <b>Action/Implementation Plan and Project Description:</b>   |                              |  |              |                                      |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |                              |  |              |                                      |  |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br>N = New; I = In Progress Toward Completion;<br>O = Ongoing Indefinitely; C = Project Completed;<br>R = Want Removed from Annex; X = No Action Taken/Delayed | O/Participating              |  |              |                                      |  |

**Action B-4.5**

| <b>Mitigation Action #B - 4.5: Consider participation in the National Flood Insurance Program as a non-mapped, participating community.</b> |  |                               |  |   |   |
|---|--|-------------------------------|--|---|---|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration  | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Short-term and ongoing | <b>Hazard(s) Mitigated:</b><br>Flooding |
| <b>Year Initiated</b>   | 2014                                       |                               |  |   |   |
| <b>Applicable Jurisdiction</b>  | City of Berwyn                             |                               |  |   |   |



|  |  |
|--|--|
| <b>Applicable Goal</b>   | 1, 2, 3, 5                                     |
| <b>Applicable Objective</b>  | 4, 6, 9  |
| <b>Cost Analysis (Low, Medium, High)</b>   | Low  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | High   |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Medium   |
| <b>Action/Implementation Plan and Project Description:</b>   | Berwyn has no floodplains in its jurisdiction. |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed | <b>O</b>                                       |

#### Action B-4.6

| <b>Mitigation Action #B - 4.6: Where feasible, implement a program to record high water marks following high water events.</b> |  |                                  |  |  |   |
|--|--|----------------------------------|--|--|---|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration   | <b>Supporting Agencies/ Organizations:</b> | <b>Estimated Cost:</b><br>Medium | <b>Potential Funding Source:</b><br>General Fund;<br>FEMA Public Assistance (PA) | <b>Estimated Projected Completion Date:</b><br>Long-term | <b>Hazard(s) Mitigated:</b><br>Flooding,<br>Severe<br>Weather |
| <b>Year Initiated</b>  | 2014                                       |                                  |  |  |   |
| <b>Applicable Jurisdiction</b>   | City of Berwyn                             |                                  |  |  |   |
| <b>Applicable Goal</b>   | 1, 2, 3, 5                                 |                                  |  |  |   |
| <b>Applicable Objective</b>  | 3, 6, 9                                    |                                  |  |  |   |
| <b>Cost Analysis (Low, Medium, High)</b>   | Medium                                     |                                  |  |  |   |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | Medium                                     |                                  |  |  |   |

|  |   |
|--|---|
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Medium  |
| <b>Action/Implementation Plan and Project Description:</b>   | Berwyn has no flood plain areas and is not adjacent to rivers or streams or water retention |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed | <b>O</b>  |

#### Action B-4.7

| <b>Mitigation Action #B - 4.7: Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</b> |  |                               |  |   |                                    |
|--|--|-------------------------------|--|---|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Public Works, City Engineer, Novotney & Associates  | <b>Supporting Agencies/ Organizations:</b>   | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Short-term | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>  | 2014   |                               |  |   |                                    |
| <b>Applicable Jurisdiction</b>   | City of Berwyn   |                               |  |   |                                    |
| <b>Applicable Goal</b>   | 1, 2, 3, 5, 6  |                               |  |   |                                    |
| <b>Applicable Objective</b>  | 3, 4, 6, 10, 13  |                               |  |   |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>   | Low  |                               |  |   |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | High   |                               |  |   |                                    |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Medium   |                               |  |   |                                    |
| <b>Action/Implementation Plan and Project Description:</b>   | New ordinances have be passed that require impermeable paving, water retention and green space use |                               |  |   |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |                               |  |   |                                    |
| <b>Project Status &amp; Changes in Priority</b>  | <b>O</b>   |                               |  |   |                                    |

|  |  |
|--|--|
| <b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action<br>Taken/Delayed |  |
|--|--|

**Action B-4.8**

| <b>Mitigation Action #B - 4.8: Evaluating the City's building code enforcement program under the Building Code Effectiveness Grading Schedule.</b>   |  |                               |  |  |  |
|--|--|-------------------------------|--|--|--|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Administration   | <b>Supporting Agencies/ Organizations:</b>   | <b>Estimated Cost:</b><br>Low | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Long-term | <b>Hazard(s) Mitigated:</b><br>All Hazards |
| <b>Year Initiated</b>  | 2014   |                               |  |  |  |
| <b>Applicable Jurisdiction</b>   | City of Berwyn   |                               |  |  |  |
| <b>Applicable Goal</b>   | 1, 2, 3  |                               |  |  |  |
| <b>Applicable Objective</b>  | 3, 10  |                               |  |  |  |
| <b>Cost Analysis (Low, Medium, High)</b>   | Low  |                               |  |  |  |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | Medium   |                               |  |  |  |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Medium   |                               |  |  |  |
| <b>Action/Implementation Plan and Project Description:</b>   | Changes have been made to the Electric and plumbing codes and adopted by city council. New changes have been made in the zoning regarding setbacks on buildings and structure height, creating more stable building construction and roof lines. |                               |  |  |  |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |                               |  |  |  |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; | <b>O</b>   |                               |  |  |  |

**R** = Want Removed from Annex; **X** = No Action Taken/Delayed

#### Action B-4.9

| Mitigation Action #B - 4.9: Publicize, train, and maintain a Community Emergency Response Team (CERT).   |   |  |  |  |                                    |
|--|---|--|--|--|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Emergency Management Agency  | <b>Supporting Agencies/ Organizations:</b><br>Berwyn Fire and Police Departments  | <b>Estimated Cost:</b><br>\$10,000; Medium | <b>Potential Funding Source:</b><br>SHSP, General Fund | <b>Estimated Projected Completion Date:</b><br>Long-term | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>  | 2019  |  |  |  |                                    |
| <b>Applicable Jurisdiction</b>   | City of Berwyn  |  |  |  |                                    |
| <b>Applicable Goal</b>   | All   |  |  |  |                                    |
| <b>Applicable Objective</b>  | 6   |  |  |  |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>   | Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.   |  |  |  |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | High Priority   |  |  |  |                                    |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Extra personnel in the event of disaster or emergency and to aiding preparedness, project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property. |  |  |  |                                    |
| <b>Action/Implementation Plan and Project Description:</b>   | CERT would create greater awareness and preparedness in the community. Along with trained personnel and some would bring in their level training or job-related expertise.  |  |  |  |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>  | 2021  |  |  |  |                                    |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; | <b>X</b>  |  |  |  |                                    |

|  |  |
|--|--|
| <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  |
|--|--|

**Action B-4.10**

| <b>Mitigation Action #B - 4.10: Publicize, train, and maintain Citizens Fire and Police Academies.</b>   |  |                                    |  |  |                                    |
|--|--|------------------------------------|--|--|------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Fire and Police Departments  | <b>Supporting Agencies/ Organizations:</b><br>BEMA   | <b>Estimated Cost:</b><br>\$10,000 | <b>Potential Funding Source:</b><br>General Fund, SHSP | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>All |
| <b>Year Initiated</b>  | 2019   |                                    |  |  |                                    |
| <b>Applicable Jurisdiction</b>   | City of Berwyn   |                                    |  |  |                                    |
| <b>Applicable Goal</b>   | All  |                                    |  |  |                                    |
| <b>Applicable Objective</b>  | 6  |                                    |  |  |                                    |
| <b>Cost Analysis (Low, Medium, High)</b>   | Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.  |                                    |  |  |                                    |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | High Priority  |                                    |  |  |                                    |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Engaging the citizens in the duties and responsibilities of Police and Paramedic/Firefighters, Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property. |                                    |  |  |                                    |
| <b>Action/Implementation Plan and Project Description:</b>   | This is a program that we have had in the past and was very successful. We plan on expanding on this by recommending that graduates of the academy continue with the CERT program.   |                                    |  |  |                                    |
| <b>Actual Completion Date or Ongoing Indefinite</b>  | Ongoing  |                                    |  |  |                                    |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed | <b>O</b>   |                                    |  |  |                                    |

## Action B-4.11

| Mitigation Action #B - 4.11: Sewer Rehab   |   |  |  |  |                                      |
|--|---|--|--|--|--------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/Organizations:</b><br>BEMA | <b>Estimated Cost:</b><br>High   | <b>Potential Funding Source:</b><br>BRIC, HMGP, General Fund | <b>Estimated Projected Completion Date:</b><br>Long-term | <b>Hazard(s) Mitigated:</b><br>Flood |
| <b>Year Initiated</b>  |   | 2023/2020  |  |  |                                      |
| <b>Applicable Jurisdiction</b>   |   | City of Berwyn   |  |  |                                      |
| <b>Applicable Goal</b>   |   | 2, 3, 5  |  |  |                                      |
| <b>Applicable Objective</b>  |   | 2, 3, 5  |  |  |                                      |
| <b>Cost Analysis (Low, Medium, High)</b>   |   | High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).  |  |  |                                      |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |   | Medium Priority  |  |  |                                      |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  |   | Better disperse water from storms to avoid residential flooding, Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property. |  |  |                                      |
| <b>Action/Implementation Plan and Project Description:</b>   |   | Sewer Rehab to include televising, cleaning, repairing, and relining sewers  |  |  |                                      |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |  |  |  |                                      |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |   | O  |  |  |                                      |

## Action B-4.12

| Mitigation Action #B - 4.12: Cost share program for storm drain check valve installation   |  |   |  |  |                                      |
|--|--|---|--|--|--------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/ Organizations:</b><br>BEMA | <b>Estimated Cost:</b><br>\$500,000   | <b>Potential Funding Source:</b><br>HMGP, BRIC | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood |
| <b>Year Initiated</b>  |  | 2023/2020   |  |  |                                      |
| <b>Applicable Jurisdiction</b>   |  | City of Berwyn  |  |  |                                      |
| <b>Applicable Goal</b>   |  | 1, 4, 5, 6  |  |  |                                      |
| <b>Applicable Objective</b>  |  | 1,4,5,6   |  |  |                                      |
| <b>Cost Analysis (Low, Medium, High)</b>   |  | Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years. |  |  |                                      |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |  | Medium Priority   |  |  |                                      |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>  |  | Reduce residential flooding, Project will provide an immediate reduction of risk exposure for life and property.  |  |  |                                      |
| <b>Action/Implementation Plan and Project Description:</b>   |  | Rebates are offered to residents who have a check valve installed in their property to stop residential flooding. \$500,000 per year is dedicated to this project.  |  |  |                                      |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |  |   |  |  |                                      |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |  | <b>O</b>  |  |  |                                      |

## Action B-4.13

| Mitigation Action #B - 4.13: Depot District water management program   |   |  |  |   |                                      |
|--|---|--|--|---|--------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/Organizations:</b><br>BEMA | <b>Estimated Cost:</b>   | <b>Potential Funding Source:</b><br>General Fund, HMGP, BRIC | <b>Estimated Projected Completion Date:</b><br>2024 | <b>Hazard(s) Mitigated:</b><br>Flood |
| <b>Year Initiated</b>  |   | 2023/2021  |  |   |                                      |
| <b>Applicable Jurisdiction</b>   |   | City of Berwyn   |  |   |                                      |
| <b>Applicable Goal</b>   |   | All  |  |   |                                      |
| <b>Applicable Objective</b>  |   | 1, 2, 3, 4, 5, 6   |  |   |                                      |
| <b>Cost Analysis (Low, Medium, High)</b>   |   | Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.                 |  |   |                                      |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |   | High Priority  |  |   |                                      |
| <b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>  |   | Not overloading the wastewater sewer system, Project will provide an immediate reduction of risk exposure for life and property.                 |  |   |                                      |
| <b>Action/Implementation Plan and Project Description:</b>   |   | The installation of a dedicated storm sewer separate from the wastewater system and permeable parking in the depot district around the hospital. |  |   |                                      |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |  |  |   |                                      |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |   | <b>O</b>   |  |   |                                      |



## Action B-4.14

| Mitigation Action #B - 4.14: Green Alleys  |   |   |   |   |                                      |
|--|---|---|---|---|--------------------------------------|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/Organizations:</b><br>BEMA | <b>Estimated Cost:</b><br>\$228,240,000   | <b>Potential Funding Source:</b><br>General Fund,<br>HMGP, BRIC | <b>Estimated Projected Completion Date:</b><br>2040 | <b>Hazard(s) Mitigated:</b><br>Flood |
| <b>Year Initiated</b>  |   | 2023/2020   |   |   |                                      |
| <b>Applicable Jurisdiction</b>   |   | City of Berwyn  |   |   |                                      |
| <b>Applicable Goal</b>   |   | 1, 3, 5   |   |   |                                      |
| <b>Applicable Objective</b>  |   | 1, 3, 5   |   |   |                                      |
| <b>Cost Analysis (Low, Medium, High)</b>   |   | High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).   |   |   |                                      |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |   | Medium Priority   |   |   |                                      |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  |   | Reduce residential flooding and reduce overloading of the storm drain system, Project will provide an immediate reduction of risk exposure for life and property.   |   |   |                                      |
| <b>Action/Implementation Plan and Project Description:</b>   |   | Permeable pavements (asphalt, concrete or pavers) that allow storm water to filter through the pavement and drain into the ground, instead of collecting on hard surfaces or draining into the sewer system. The pavement can be used on the full width of an alley, or simply in a center trench. Catch basins connected with perforated pipe and installed in retention trench to capture water and funnel it into the ground High-albedo pavement, a lighter-colored surface that reflects sunlight instead of absorbing it, helping reduce the urban heat island effect Recycled materials, such as concrete aggregate, slag and recycled tire rubber |   |   |                                      |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |   |   |   |                                      |
| <b>Project Status &amp; Changes in Priority Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion; |   | <b>O</b>  |   |   |                                      |

**O** = Ongoing Indefinitely; **C** = Project Completed;  
**R** = Want Removed from Annex; **X** = No Action  
 Taken/Delayed

**Action B-4.15**

| <b>Mitigation Action #B - 4.15: Tree Pruning and replacement</b>   |   |                                     |  |  |   |
|--|---|-------------------------------------|--|--|---|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/ Organizations:</b><br>BEMA  | <b>Estimated Cost:</b><br>\$250,000 | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Lightning, High Wind, Severe Winter Weather, Widespread power outage |
| <b>Year Initiated</b>  | 2023/2018   |                                     |  |  |   |
| <b>Applicable Jurisdiction</b>   | City of Berwyn  |                                     |  |  |   |
| <b>Applicable Goal</b>   | 1, 2, 3, 4, 5   |                                     |  |  |   |
| <b>Applicable Objective</b>  | 1,2,3,4,5   |                                     |  |  |   |
| <b>Cost Analysis (Low, Medium, High)</b>   | Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.                        |                                     |  |  |   |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  | Medium Priority   |                                     |  |  |   |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  | Keeps dead branches from effecting powerlines and other infrastructure, Long-term benefits of the project are difficult to quantify in the short term.  |                                     |  |  |   |
| <b>Action/Implementation Plan and Project Description:</b>   | Public works assesses trees damaged by emerald ash bores and other plight and trims or replaces the trees to avoid damage during high winds and storms. |                                     |  |  |   |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |                                     |  |  |   |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed | <b>O</b>  |                                     |  |  |   |

## Action B-4.16

| Mitigation Action #B - 4.16: Snow Removal  |   |   |  |  |   |
|--|---|---|--|--|---|
| <b>Lead Agency/Department Organization:</b><br>Berwyn Public Works   | <b>Supporting Agencies/Organizations:</b><br>BEMA | <b>Estimated Cost:</b><br>\$150,000   | <b>Potential Funding Source:</b><br>General Fund | <b>Estimated Projected Completion Date:</b><br>Ongoing | <b>Hazard(s) Mitigated:</b><br>Flood, Severe Winter Weather |
| <b>Year Initiated</b>  |   | 2023  |  |  |   |
| <b>Applicable Jurisdiction</b>   |   | City of Berwyn  |  |  |   |
| <b>Applicable Goal</b>   |   | 1, 2, 3, 5  |  |  |   |
| <b>Applicable Objective</b>  |   | 1, 2, 3, 5  |  |  |   |
| <b>Cost Analysis (Low, Medium, High)</b>   |   | Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.  |  |  |   |
| <b>Priority and Level of Importance (Low, Medium, High)</b>  |   | High Priority   |  |  |   |
| <b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)  |   | Prevents loss of roadways/travel and critical services, Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property. |  |  |   |
| <b>Action/Implementation Plan and Project Description:</b>   |   | 24 hour services include de-icing, anti-icing, and snow removal to green spaces that allow the snow to melt into the ground instead of the storm system.  |  |  |   |
| <b>Actual Completion Date or Ongoing Indefinite</b>  |   |   |  |  |   |
| <b>Project Status &amp; Changes in Priority</b><br><b>Completion status legend:</b><br><b>N</b> = New; <b>I</b> = In Progress Toward Completion;<br><b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;<br><b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed |   | <b>O</b>  |  |  |   |

## Completed Actions

**Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.**

| Completed Action Items            |
|-----------------------------------|
| No completed actions at this time |

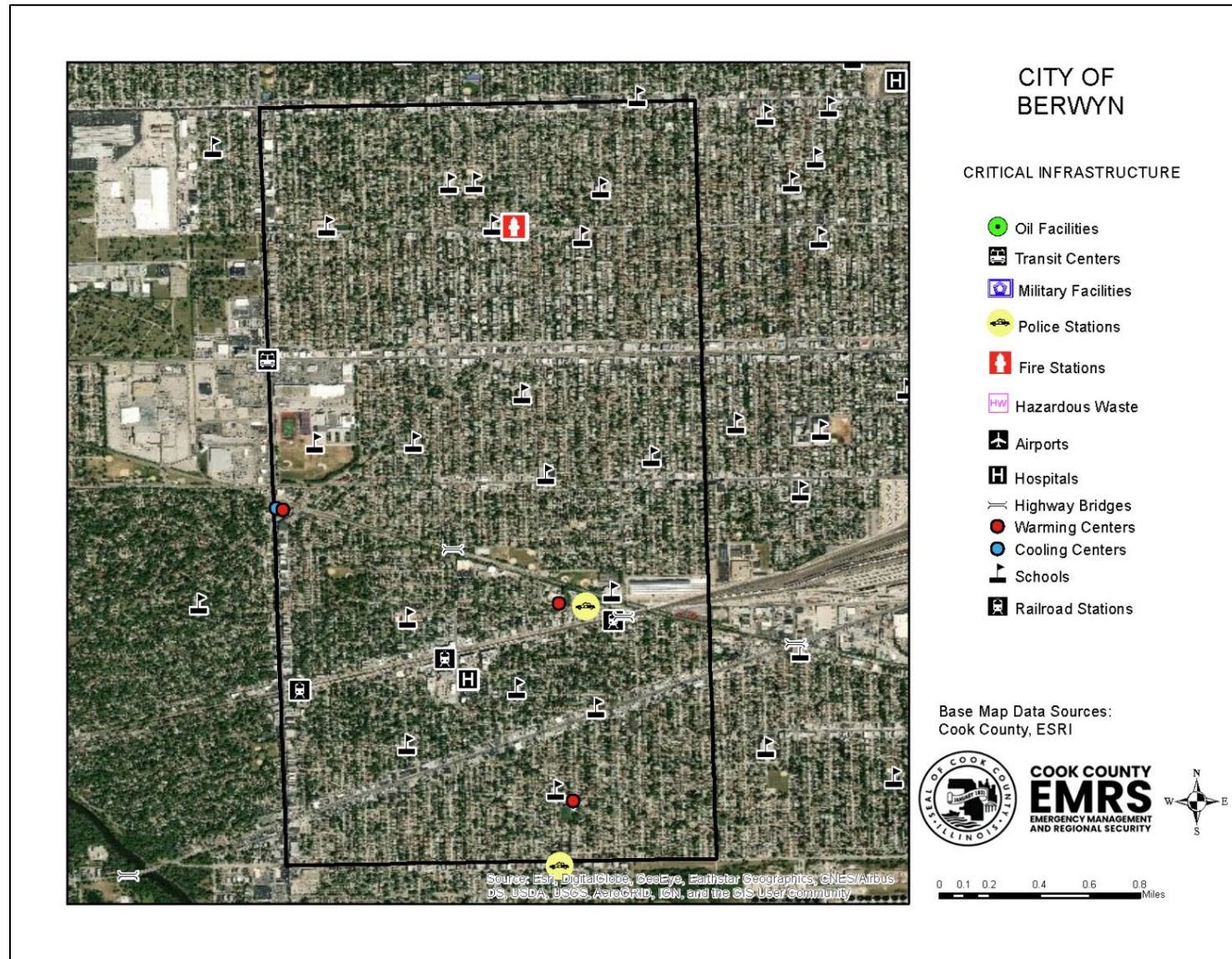
## Future Needs to Better Understand Risk/Vulnerability

The City of Berwyn is working to convert all 655 alleys within the city limits to green alleys. The project is underway, with 21 alleys complete, but at a cost of approximately \$360,000 per alley it over-stresses the local budget. The City is in need of grant funding to move this project forward.

## Additional Comments

No additional comments at this time.

## Hazard Mapping







## CITY OF BERWYN

### PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

#### Mercalli Scale, Potential Shaking

II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County.

Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction program) site classes B and C.

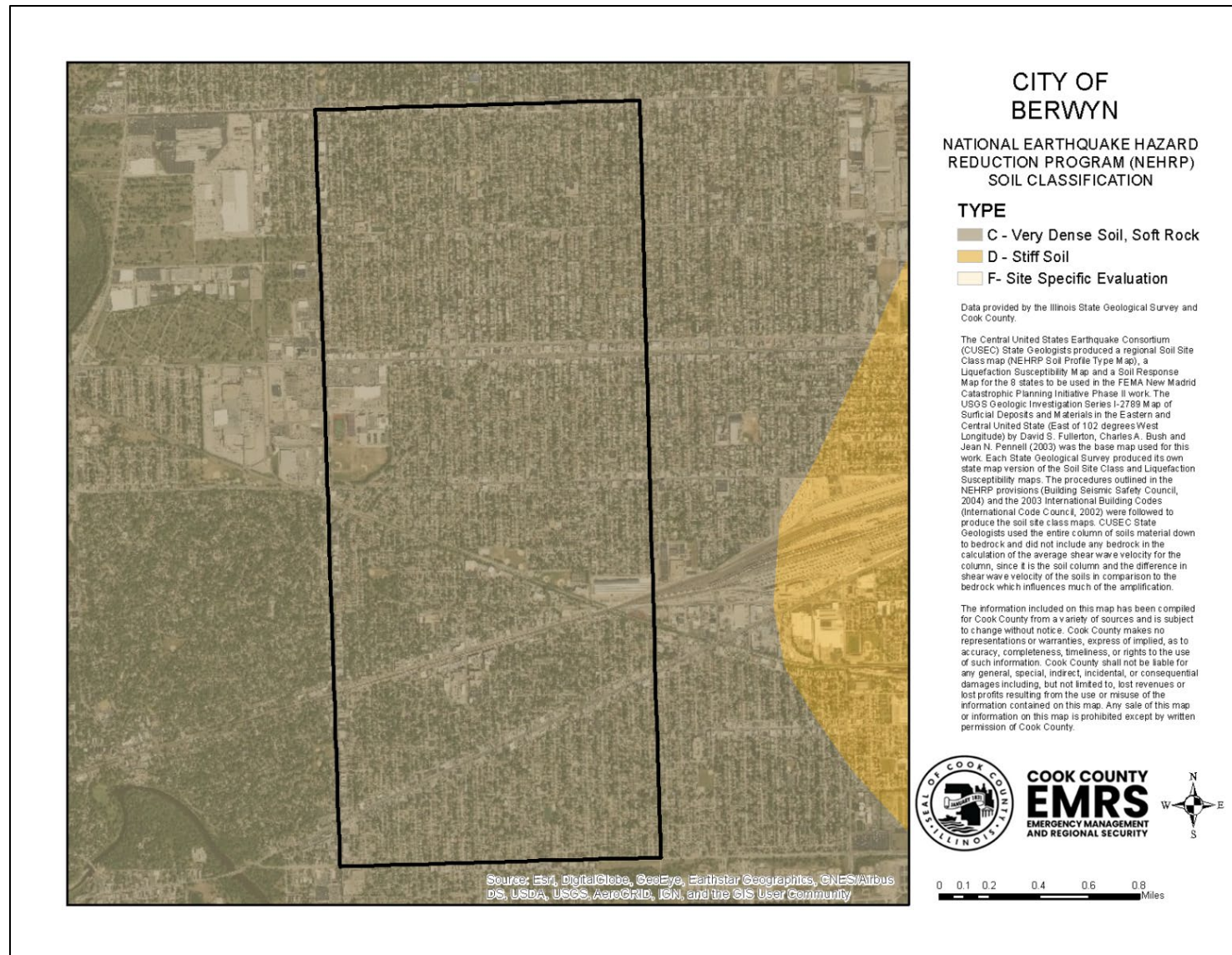
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**COOK COUNTY**  
**EMRS**  
EMERGENCY MANAGEMENT  
AND REGIONAL SECURITY



0 0.1 0.2 0.4 0.6 0.8 Miles





DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from <http://www.fema.gov>.

